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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,635

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Hiroshi Nojima

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1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

EXAMINER

ROBINSON, GRETA LEE

ART UNIT

PAPER NUMBER

2168

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/649,635	Applicant(s) NOJIMA, HIROSHI	
	Examiner Greta L. Robinson	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 21-24 are pending in the present application.
2. Claims 21-24 have been amended. Claims 1-20 are cancelled.

Drawings

3. The drawings were received on June 27, 2007. These drawings are acceptable.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21, the following limitation is vague and/or not clear: "acquiring, from the plurality of storage devices, characteristic values defined for each volume of the plurality of storage devices, and storing the acquired characteristic values with a correspondence to said volume defined thereby" [see claim 1 lines 6-9]. The claim appears to omit the characteristic values are "stored in memory" with reference to web contents. Support for this can be found on page 6 lines 14-21 of the disclosure. Claim

23 contains similar limitation; therefore it is rejected under the same rationale [see: claim 23 lines 6-9]. Claims 22 and 24 are rejected based on dependency.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelb et al. US Patent 5,018,060 in view of Warr US Patent 5,131,087.

Regarding claim 21, **Gelb et al.** teaches a storage management method for managing operations of a plurality of storage services storing information that is provided to a business server having a plurality of applications accessed via a network, the method executed by an operation management server coupled to the network [see: abstract "Units of data (data sets, data bases, etc.) are allocated data storage space in a data storage system based on implicit analysis of the unit of data. A plurality of data classes, each defining predetermined characteristics of diverse units of data, are established for the data storage system. A plurality of storage classes, each defining predetermined sets of storage performance and availability requirements are established for the data storage system"], comprising:

acquiring, from the plurality of storage devices, characteristic values defined for each volume of the plurality of storage devices, and storing the acquired characteristic values with a correspondence to said volume defined thereby [note: Figure 2 (15) define data classes and (16) define storage classes; Figure 8 receive storage request and access storage];

obtaining a performance level and a reliability level of each of the volumes according to a type of an application, and storing the obtained performance and reliability levels, wherein said performance and reliability levels are obtained by using attribute information defined for each of the volumes and evaluation function coefficients previously stored in association with the type of application [note: col. 1 lines 7-46; col. 5 line 56 through col. 6 line 7; col. 7 lines 41-53; and col. 8 lines 22-24];

obtaining upper and lower limit threshold values of each of a plurality of classification levels from the obtained performance and reliability levels of each of the volumes, based on a policy for selecting volumes, and making a correspondence between each of the volumes and each of the classification levels based on the classification level to which the performance and reliability values of each volume correspond [note: col. 4 lines 25-56 “diverse types of data sets to be stored and retrieved from peripheral data storage”; col. 10 lines 14-37 high and low thresholds may be set by programming means].

Although Gelb et al. teaches the invention as cited above, they do not explicitly teach determining a “candidate volume” to be selected and made accessible to said business server, based on a classification level designated by a user and on the

correspondence between each of the volumes and each of the classification levels. However, **Warr** teaches determining a candidate volume to be selected accessible based on a classification [see: Figure 4 “CANDIDATE SELECTION” element 412; col. 8 lines 5-42 candidate volumes; column 8 line 61 though column 9 line 9; column 10 lines 35-38; and column 22 lines 12-32 “optimization routine 308 looks at all good or cache candidate volumes”; col. 25 lines 20-60 candidate selection]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Warr with Gelb et al because a candidate volume selection routine would provide a means of selecting the best storage volume for data storage.

8. The limitations of system claim 23 parallels method claim 21; therefore it is rejected under the same rationale.

Allowable Subject Matter

9. Claims 22 and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 21-24 have been considered but are moot in view of the new ground(s) of rejection. Note newly cited prior art references

Gelb et al. in view of war Supra. Applicant's remarks and amendment overcomes previous rejections cited under 35 USC 101, 35 USC 112 first and second paragraphs.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Muthiyan et al. US Patent 7,328,260 B1

Goyal et al. US Patent Application Publication No. 2004/0122799 A1

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Greta L. Robinson/
Primary Examiner, Art Unit 2168
March 15, 2008